

A NEW SPECIES OF CAREX § EXTENSAE

ALEXANDER ROBERTSON

During the Canadian Botanical Association's A.G.M. field tour of western Newfoundland (7-12 August 1978), a dwarf member of the genus *Carex* § *Extensae* was found on calcareous limestone barrens along the seashore at several locations from Bellburns to Pointe Riche on the Northern peninsula. A description of the species follows.

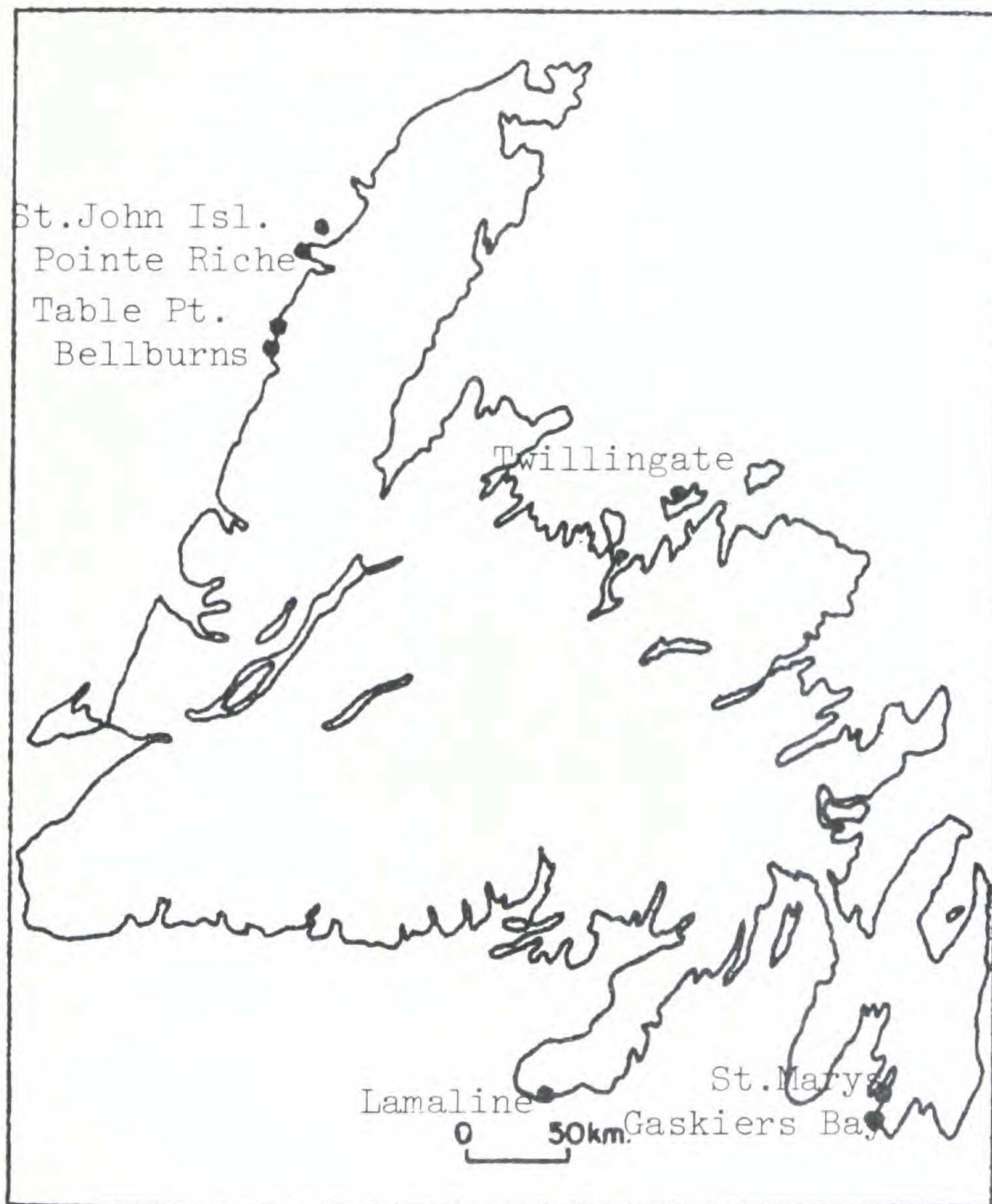


Figure 1. Distribution of *C. saxilittoralis* in Newfoundland.

Carex saxilittoralis Robertson, *spec. nov.*, (*Extensae*)

Perennis laxe cespitosa, alta vel 1–5 cm. Caudex emmittens stolones brevis, radix longa gracilis atrobrunneus. Vaginae fulvus ad brunneus, foliorum deciduorum marcescens obtecta basibus; fasciatus interiora hyalinus, concavus et sinuolatus; ligula lates quam longus. Culmi phyllopori, folio 3 vel 4 ad basim aggregata vaginis, ascendens-diffusus vel recurvatus, 3–8 cm longae, 1.5–5.0 latae, complanatus ad plicatus, inconspicuus septatus-nodulus, margine et costa scabrellus in supra $1/4$ – $1/3$. Culmi sterilis cespitosa. Culmi frondosa unus vel aliquot ascendens rigidus 0.5–8.0 cm alti plerumque valde quam folio laterum quadricostatus spiratum prope summum, angulo obtusus et laevis, transversus sectio cum amplius cavitas centralis et prominens fasciculus vascularis. Spici terminalis masculae, pedunculatus vel subsessilis, 1.5–2.0 cm longae, 2.0 mm latae, linearis-cylindraceus; spicis lateralis feminae, 1–2 (raro 3) contiguous-approximate et sessile vel infimus interdum basibus et subsessilis 5.0–7.0 mm longae, 3.0–6.0 mm latae, globus-ovoideus; bractae infimus (spici basibus) foliaceus ascendens aequano inflorescentia longivaginans, bractae summum brevior plus minusve exedens inflorescentia divaricatus vel defluxus spathiformis vel subterminalis squamatis et inconspicuus. Squama feminae vinaceus ad brunneus aequans et angustata quam corpus perigynium ovatus-lanceolatus summa obtusus et erose costa viridi pallens trinervis quasi summum. Squama masculae pallens brevior lanceolatus. Perigynia squarrosus fulvus ad brunneus 2.0–3.0 mm longae, 1.0–1.5 mm latae, obovoideus biconvexus manifeste bicostatus et decinervis basi-truncatus, rostrum 0.5 mm latae abruptus et tennis stricto vel ventraliter obliquus emerginatus. Achenium perigynium laxe complens atrobrunneus obovoideus trigonus subapiculatus; stylus contortus basibus brunneus 0.3 mm longae tristigmata 2.0 mm longae a intra rostrum.

A loosely cespitose perennial, 1–5 cm tall. Leaves clustered toward base, generally diffuse and recurved; 3–8 cm long, 1.5–5 mm wide. Fertile culms 1–few, exceeding leaves; terminal spikes solitary, staminate, peduncled-subsessile; lateral spike 1–2(3), contiguous-approximate and sessile, or the lowermost basal and peduncled. Perigynia squarrose, yellowish-green or brown, beak $1/4$ as long as body. Achene dark brown; style contorted at base; stigmas 3.

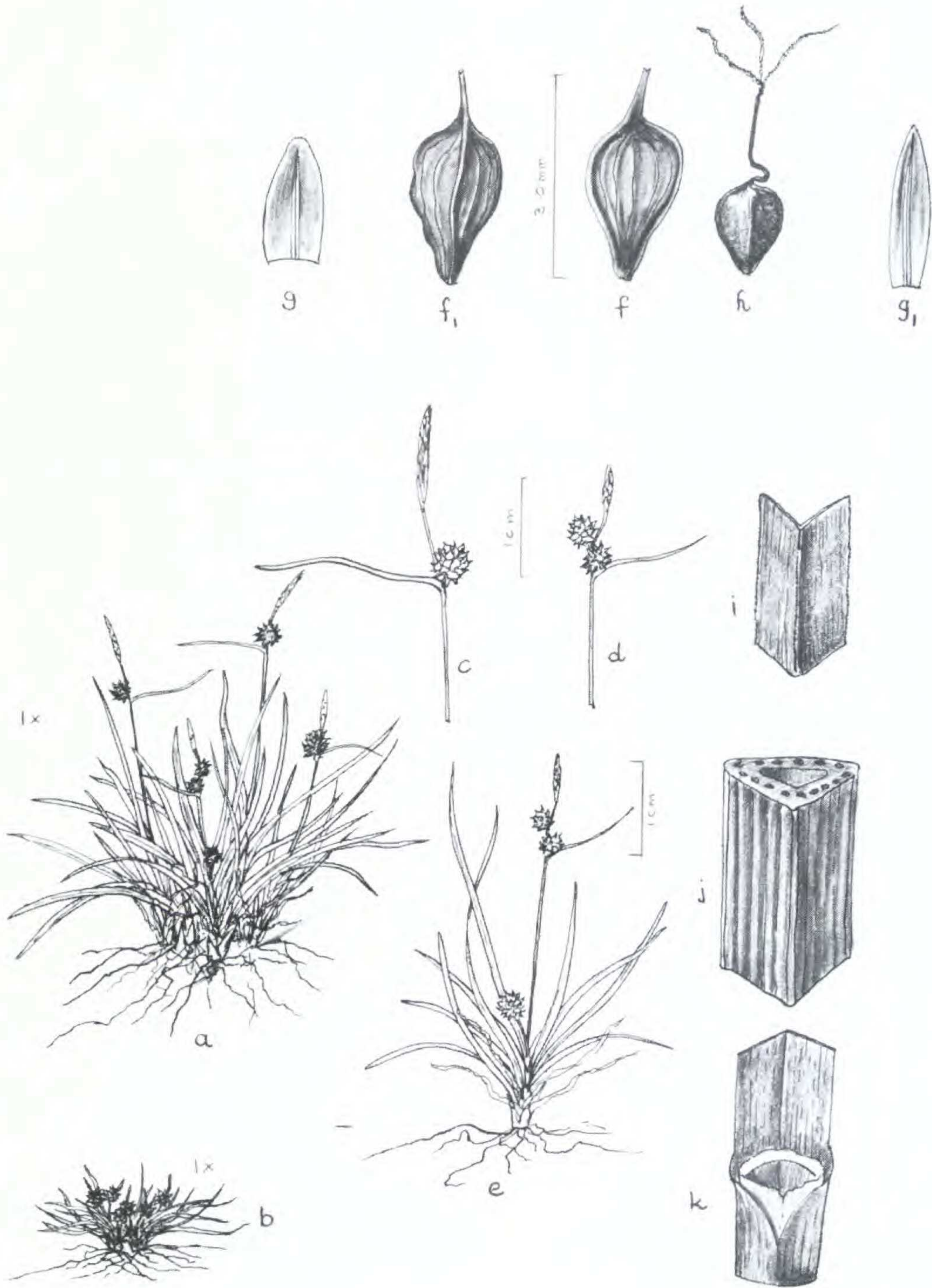


Figure 2. Illustration of *C. saxilittoralis*. **a & b**, habit; **c-e**, variations of fructifications; **f**, dorsal view of perigynium; **f₁**, lateral view of perigynium; **g**, pistillate scale; **g₁**, staminate scale; **h**, achene; **i**, midsection of leaf; **j**, midsection of culm; **k**, ligule.

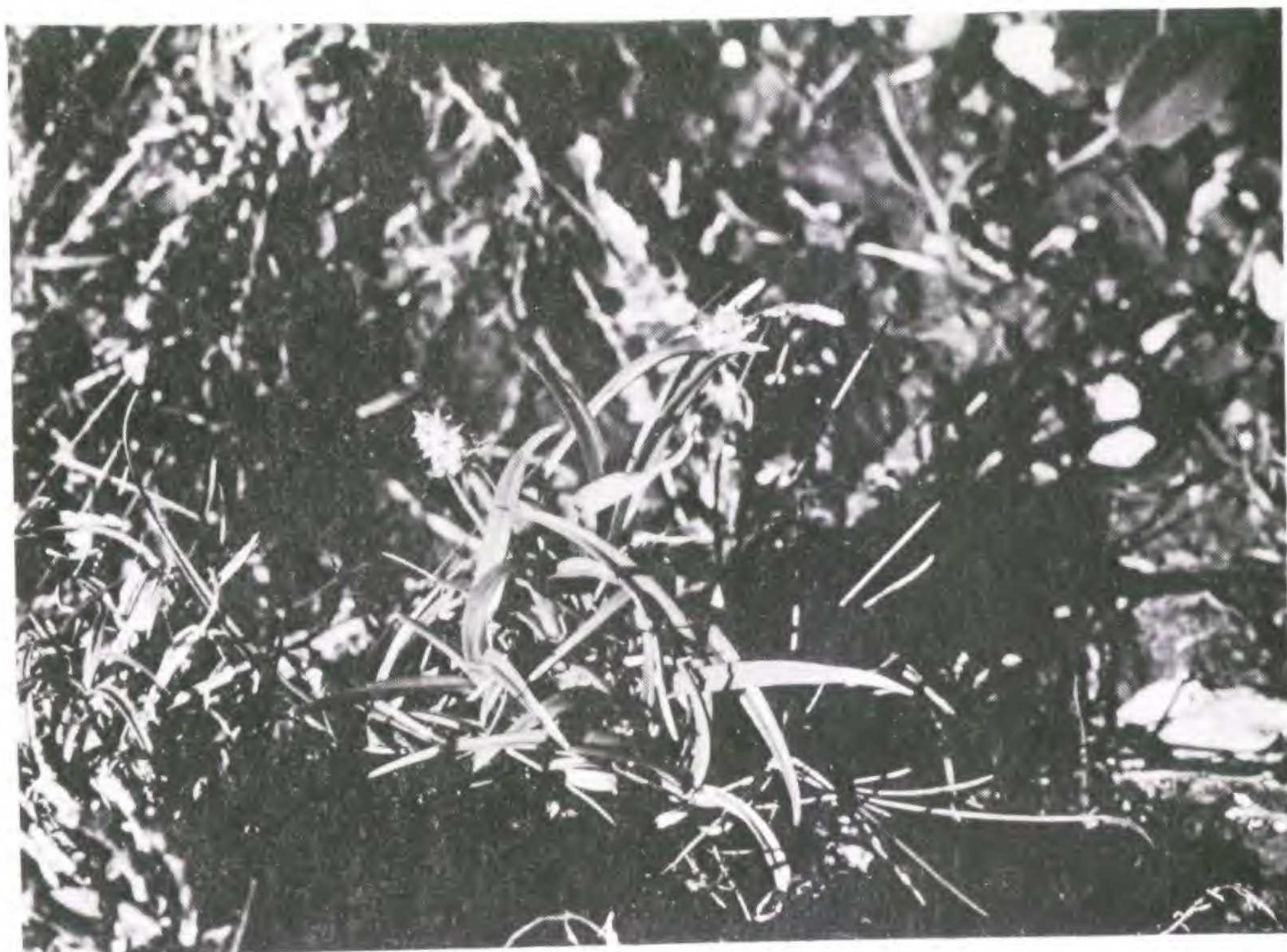


Figure 3. Photographs of *C. saxilittoralis* at type locality.

Photos by E. D. Wells, NFRS

Habitat: Clay soils mixed with limestone gravel on exposed calcareous barrens near seashore and on gravelly beaches in transitional zone between high tide and small brooks.

SPECIMENS EXAMINED. CANADA. NEWFOUNDLAND. **St. Barbe South District.** Bellburns, *A. Robertson* 3,430 (NH CAN), TYPE, duplicate in NFRC; Bellburns, Table Point, *A. Robertson* 3,431 (NFRC); Pointe Riche, *Fernald & Weigand* 2,912 (GH), *A. Robertson* 3,432 (NFRC); St. John's Island, *Fernald, Weigand, Long, Gilbert, & Hotchkiss* 27,733 (GH). **Twillingate District.** Twillingate, *D. Weber* 16,738 (MUN). **Placentia West District.** Lamaline, *E. Rouleau* 5,891 (MT). **St. Mary's District.** Gaskier's Bay, *A. Robertson* 3,614 (NFRC); St. Mary's, *A. W. H. Damman* 1,081 (MUN) (as *C. demissa*).

Carex saxilittoralis is one of two species in the EXTENSAE group which frequently have one lateral spike; the other is *C. lepidocarpa* Tausch. In fact this feature, plus the peduncled terminal staminate spike common to both species, suggests that they are closely allied.

Specimens of *Carex saxilittoralis* were first collected by Weigand on Pointe Riche in 1910 and later by Fernald and his colleagues on St. John's Island (Fernald, 1926). Fernald identified these as *C. Oederi* Retz. var. *subglobosa* (Meilich.) Richter. Harold St. John (1922) also collected a dwarf *Carex* which he identified as *C. Oederi* Retz. var. *pumila* (Coss. & Germ.) Fernald. Both these names are synonymous with an European species of the *C. flava* aggregates, namely *C. scandinavica* E. W. Davies (= *C. Oederi* Retz. subspecies *pulchella* (Lonnr.) van Ooststr.) which is taxonomically and phyto-geographically distinct from *C. saxilittoralis*. Close examination of specimens in the field and in herbaria shows that this taxon is morphologically distinct and ecologically isolated from other members of the EXTENSAE group. Since existing classifications fail to incorporate this knowledge it is proposed to describe this taxon as a new species.

I wish to thank my friend Dr. Dwight Kincaid of the Gray Herbarium for his encouragement and assistance.

REFERENCES

- DAVIES, ELIZABETH W. 1953. Notes on *Carex flava* and its allies: 1. A sedge new to the British Isles. *Watsonia* 3: 66-69.
- FERNALD, M. L. 1926. Two summers botanizing in Newfoundland. *Rhodora* 28 (328-336): 49-241.
- ST. JOHN, HAROLD. 1922. A botanical exploration of the north shore of the Gulf of St. Lawrence, including an annotated list of the species of vascular plants. Canada Dept. of Mines, Victoria Memorial Museum, Ottawa, *Memoir* 126: No. 4 Biological Series.

CURATOR

NEWFOUNDLAND FOREST RESEARCH CENTRE HERBARIUM
P. O. BOX 6028, ST. JOHN'S
NEWFOUNDLAND, CANADA, A1C 5X8